

REMARKS

Claims 1-20 and 31 remain in this application. Claims 1, 2, 4, 11, and 16 have been amended. No claims have been added or cancelled. The Applicants respectfully request reconsideration of this application in view of the above amendments and the following remarks.

Election/Restriction

The Examiner has previously withdrawn claims 1-15 from consideration. Applicants have amended claim 1 so that it recites limitations that are similar to those of claim 16 before the amendments herein. Therefore, claims 1 and its dependent claims should be examined along with claim 16 and its dependent claims in the present application.

35 U.S.C. §102(b) Rejection - Okino

The Examiner has rejected claims 16-17, 20, and 31 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,303,266 B1 to Okino et al. (hereinafter referred to as "Okino"). The Applicants respectfully submit that the present claims are allowable over Okino.

Claim 1 as amended recites a compound comprising: "*a polymeric chain; and a dissolution inhibitor group attached to the polymeric chain at an anhydride linkage*". Okino does not teach or suggest these limitations.

In particular, Okino does not teach or suggest a dissolution inhibitor group attached to a polymeric chain at an anhydride linkage. Okino discusses resins of alicyclic backbond type (see e.g., column 13, line 54; and column 1, lines 58-59). Okino discloses several resins of alicyclic backbone type that have acid anhydride linkages as a part of the

alicyclic backbone itself. For example, see the structure of the resin at column 58, the structure of the resin at the top of column 59, the structure of the resin at the bottom of column 72, and the structure of the resin at the bottom of column 80. Each of these resins have an acid anhydride linkage that includes two acyl groups bonded to the same oxygen atom.

It is significant to note, however, that in each of these structures the acid anhydride linkage is a part of the alicyclic backbone of the resin. The acid anhydride linkage are not used to attach a dissolution inhibitor group to a polymeric chain, but rather the acid anhydride linkage are a part of the alicyclic backbone of the resin itself. This is a significant distinction. A simple analogy of a necklace may help to illustrate the difference. Rather than the acid anhydride linkage being used to link a pendent to the chain of the necklace, the acid anhydride linkage is part of the chain itself. This is clearly shown in the structures of the resins at column 58, at the top of column 59, at the bottom of column 72, and at the bottom of column 80.

In contrast, a resist compound according to one embodiment of the present invention may have the chemical formula (1) given on page 5 of the present patent application. As shown in this chemical formula, a group 2 is attached to the polymeric chain 1 rather than being linked as part of the polymeric chain. Okino does not teach or suggest a dissolution inhibitor group attached to a polymeric chain at an anhydride linkage.

Anticipation under 35 U.S.C. Section 102 requires every element of the claimed invention be identically shown in a single prior art reference. The Federal Circuit has indicated that the standard for measuring lack of novelty by anticipation is **strict identity**. *"For a prior art reference to anticipate in terms of 35 U.S.C. Section 102, every element*

of the claimed invention must be identically shown in a single reference." In *Re Bond*, 910 F.2d 831, 15 USPQ.2d 1566 (Fed. Cir. 1990).

For at least this reason, claim 1 and its dependent claims are believed to be allowable over Okino.

Claim 16 as amended recites a compound comprising: *"a polymeric chain including polyhydroxystyrene; a dissolution inhibitor attached to the polyhydroxystyrene of the polymeric chain at an anhydride linkage"*. Okino does not teach or suggest these limitations.

In particular, Okino does not teach or suggest a dissolution inhibitor attached to polyhydroxystyrene at an anhydride linkage. Okino focuses primarily on resists of the alicyclic backbone type (see e.g., column 13, line 54; and column 1, lines 58-59). Additionally, Okino teaches away from using polyhydroxystyrene at column 1, lines 44-53, where it is stated, *"resists containing, as base resins, resins containing aromatic compounds, which have commonly been used heretofore, have such a peculiarity that benzene nucleus contained in the compounds show high light absorption against the above-described short-wavelength light. Therefore, when it is tried to form a resist pattern, it is difficult to allow light to fully reach the substrate side of a resist film when the film is exposed to light. It has thus been difficult to form, with high sensitivity and high accuracy, patterns excellent in shape."* Furthermore, at column 1, lines 58-59 it is stated *"those resists containing alicyclic compounds in place of aromatic compounds are now attracting attention"*. In any event, there is no teaching or suggestion in Okino of a dissolution inhibitor attached to polyhydroxystyrene at an anhydride linkage.

Anticipation under 35 U.S.C. Section 102 requires every element of the claimed invention be identically shown in a single prior art reference. The Federal Circuit has indicated that the standard for measuring lack of novelty by anticipation is **strict identity**.

"For a prior art reference to anticipate in terms of 35 U.S.C. Section 102, every element of the claimed invention must be identically shown in a single reference." In Re Bond, 910 F.2d 831, 15 USPQ.2d 1566 (Fed. Cir. 1990).

For at least this reason, claim 16 and its dependent claims are believed to be allowable over Okino.

35 U.S.C. §103(a) Rejection - Okino

The Examiner has rejected claims 18-19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,303,266 B1 to Okino et al. (hereinafter "Okino"). The Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants respectfully submit that there is no such suggestion or motivation in Okino. Applicants further respectfully submit that the Examiner has failed to show where the suggestion or motivation is in the knowledge generally available to one of ordinary skill in the art.

Furthermore, as was stated in In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984), *"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification."* (emphasis added). The Examiner has stated that it would be obvious to use an anhydride linkage that includes sulfur or phosphorous *"with an expectation of improving the dissolution contrast between exposed and unexposed areas"*. Applicants respectfully submit that Okino does not state that this advantage would be achieved. Applicants further respectfully submit that the

Examiner has failed to show where the achievement of this advantage is in the knowledge generally available to one of ordinary skill in the art. Thus the Examiner has failed to show where the prior art suggests the desirability of modifying Okino by using an anhydride linkage that includes sulfur or phosphorous.

As the Examiner is well aware, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

For at least these reasons, the Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness, and that it is simply improper to modify Okino as proposed by the Examiner.

Conclusion

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance. Applicants respectfully request that the claims be allowed at the earliest possible date.

Request For Telephone Interview

The Examiner is invited to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For An Extension Of Time

The Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

Charge Our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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